

APPENDIX I

CLAIMS PENDING IN 09/250,056 WITH ENTRY OF THIS AMENDMENT

1. (Once amended) A[n] single chain antibody that specifically binds to a c-erbB2 receptor, that is cross reactive with F5 (SEQ ID NO:1) or C1 (SEQ ID NO:2) at c-erbB2, and that is an internalizing antibody [epitope bound by F5 or C1].

3. The antibody of claim 1, wherein said antibody comprises an amino acid sequence selected from the group consisting of SEQ ID NO: 1, SEQ ID NO: 2, SEQ ID NO: 1 having conservative substitutions, and SEQ ID NO: 2 having conservative substitutions.

4. (Once amended) The antibody of claim 1, wherein said antibody shares at least 70% sequence identity with the amino acid sequence of SEQ ID NO: 1 or SEQ ID NO: 2 and wherein said antibody has a binding affinity for c-erbB2 on cells of at least 10 mM.

5. The antibody of claim 1, wherein the amino acid sequence of said antibody differs from the amino acid sequence of SEQ ID NO: 1 or SEQ ID NO: 2 by no more than 30 residues.

6. The antibody of claim 1, wherein said antibody comprises a complementarity determining region (CDR) of SEQ ID NO: 1.

7. The antibody of claim 1, wherein said antibody comprises a complementarity determining region (CDR) of SEQ ID NO: 2.

8. The antibody of claim 1, wherein said antibody comprises at least two complementarity determining region (CDRs) of SEQ ID NO: 1.

9. The antibody of claim 1, wherein said antibody comprises at least two complementarity determining regions (CDRs) of SEQ ID NO: 2.

10. The antibody of claim 1, wherein said antibody comprises at least two complementarity determining region (CDRs) selected from the group consisting of the complementarity determining regions of SEQ ID NO: 1, and complementarity determining regions of SEQ ID NO: 2.

11. The antibody of claim 1, wherein said antibody comprises at least three complementarity determining region (CDRs) selected from the group consisting of the complementarity determining regions of SEQ ID NO: 1, and complementarity determining regions of SEQ ID NO: 2.

12. (Once amended) The antibody of claim 11, wherein said antibody [has]comprises three complementarity determining regions of the amino acid sequence of SEQ ID NO: 1.

13. (Once amended) The antibody of claim 1, wherein said antibody [has] comprises three complementarity determining regions of the amino acid sequence of SEQ ID NO: 2.

14. (Once amended) The antibody of claim 1, wherein said antibody [has] comprises the amino acid sequence of SEQ ID NO: 1.

15. (Once amended) The antibody of claim 1, wherein said antibody [has] comprises the amino acid sequence of SEQ ID NO: 2.

16. (Once amended) A[n] single chain antibody that specifically binds to a c-erbB2 receptor, said antibody comprising at least 10 contiguous amino acids from the polypeptide sequence as set forth in SEQ ID NO: 1 or SEQ ID NO: 2, wherein said antibody:
[said antibody,]when presented as an antigen, elicits the production of an anti-idiotypic antibody that specifically binds to a polypeptide comprising an amino acid sequence as set forth in SEQ ID NO: 1 or SEQ ID NO: 2; and
[said antibody]does not bind to antisera raised against the polypeptide set forth in SEQ ID NO: 1 and SEQ ID NO: 2, that has been fully immunosorbed with the polypeptides set forth in SEQ ID NO: 1 and in SEQ ID NO: 2.

17. (Once amended) The antibody of claim 16, wherein said antibody shares at least 70% sequence identity with the amino acid sequence of SEQ ID NO: 1 or SEQ ID NO: 2 and wherein said antibody has a binding affinity for c-erbB2 on cells of at least 10 [μ]M.

18. The antibody of claim 16, wherein the amino acid sequence of said antibody differs from the amino acid sequence of SEQ ID NO: 1 or SEQ ID NO: 2 by no more than 30 residues.

19. The antibody of claim 16, wherein said antibody comprises a complementarity determining region (CDR) of SEQ ID NO: 1.

20. The antibody of claim 16, wherein said antibody comprises a complementarity determining region of SEQ ID NO: 2.

21. (Once amended) The antibody of claim [1]16, wherein said antibody [has] comprises the amino acid sequence of SEQ ID NO: 1.

22. (Once amended) The antibody of claim [1]16, wherein said antibody [has] comprises the amino acid sequence of SEQ ID NO: 2.

34. A chimeric molecule that specifically binds a cell bearing a c-erbB-2, said chimeric molecule comprising an effector molecule attached to an antibody of claims 1 or 16.

35. The chimeric molecule of claim 34, wherein said effector is selected from the group consisting of a cytotoxin, a label, a radionuclide, a drug, a liposome, a ligand, and an antibody.

36. The chimeric molecule of claim 34, wherein said chimeric molecule is a fusion protein.

37. The chimeric molecule of claim 34, wherein said cell is a cancer cell.

38. The chimeric molecule of claim 37, wherein said cancer cell is a breast cancer cell.

39. (Once amended) The chimeric molecule of claim 34, wherein said antibody shares at least 70% sequence identity with the amino acid sequence of SEQ ID NO: 1 or SEQ ID NO: 2 and wherein said antibody has a binding affinity for c-erbB2 of at least 10 [μ]M.

40. The chimeric molecule of claim 34, wherein the amino acid sequence of said antibody differs from the amino acid sequence of SEQ ID NO: 1 or SEQ ID NO: 2 by no more than 30 residues.

41. The chimeric molecule of claim 34, wherein said antibody comprises a complementarity determining region (CDR) of SEQ ID NO: 1.

42. The chimeric molecule of claim 34, wherein said antibody comprises a complementarity determining region (CDR) of SEQ ID NO: 2.

43. (Once amended) The chimeric molecule of claim 34, wherein said antibody [has]comprises the amino acid sequence of SEQ ID NO: 1.

44. (Once amended) The chimeric molecule of claim 34, wherein said antibody [has]comprises the amino acid sequence of SEQ ID NO: 2.

53. (Once amended) A [pharmaceutical] composition comprising a pharmacological excipient and the antibody of claims 1 or 16

54. (Once amended) A [pharmaceutical] composition comprising a pharmacological excipient and the chimeric molecule of claim 34.